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TECHNICAL SUPPORT DOCUMENT

SECTION **PAGE ADDENDA**

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Application For Certificate Of Public Convenience And Necessity and Permits

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TECHNICAL SUPPORT DOCUMENT

2.1 ENGINEERING INFORMATION

2.1.2 General Description

2.1.2.1 Size of Lines

Item 1: (2.1.2) Provide an estimate of the total number of structures needed for each route.

Response to Item 1:

The Preferred Route will utilize approximately 80 structures The Alternate Route will utilize approximately 89 structures.

2.1 ENGINEERING INFORMATION

2.1.2 General Description

2.1.2.2 Transmission Line Configuration

Item 2: (2.1.2.2, pages 2-3 of 47) The length or width of new ROW needed in Segment 1 where the two 138kV lines would run parallel to each other is missing. The length of new ROW needed in Segments 24 and 35 is missing.

Response to Item 2:

The existing text of Section 2.1.2.2 should be deleted and replaced with the following:

The proposed transmission line configuration is primarily a single-circuit line on right-of-way (ROW) newly purchased by ATC, however, a majority of that new ROW would be shared with existing overhead distribution circuits and road ROW, with the following exceptions:

Segment 1 (Preferred Route). An existing 138 kV line (North Madison to Sycamore) will most-likely become double-circuited with the new 138 kV line, and therefore additional ROW acquisition will not be required, as the lines will be on existing ROW.

Segment 24 (Alternate Route). At the south end of this segment, the transmission line would turn south at the west end of Uniek Drive/Foundation Circle and travel along a railroad spur. A full 80-foot-wide easement would be required. For Segment 24, the required length of new ROW would be approximately 700-feet.

Segments 27, 31, 34 (Alternate Route) **and 36** (common to both Preferred and Alternate Routes). These segments will be constructed on existing transmission line ROW, double-circuit with the existing Waunakee to Huiskamp 69 kV line. Please refer to Appendix A, Table 1 for segment length and width **Segment 35** (Preferred Route). At the far west end of Segment 35, the proposed transmission line would be on new ROW across from the Wingra Redi-Mix Plant; this portion of Segment 35 is not parallel to a road or distribution circuit. The required length of this new ROW would be a maximum of 300 feet.

The new ROW needed to be acquired for the line would be 80 feet wide (40 feet on each side of the centerline). Along roads, the transmission line centerline is expected to be approximately 5 feet inside private property lines, with a total of 45-foot overall width on private property. The center of any large diameter concrete footings may need to be more than 5 feet on private property so that no part of the footing is on road ROW.

Portions of the proposed line may be constructed within highway ROW along state trunk highway (STH) 113. ATC has consulted with the Wisconsin Department of Transportation (WisDOT) to determine if any portion of the line may be routed within the State Highway ROW, where necessary and appropriate, to further minimize the incremental impacts of the new line on the environment and private land owners. Conditions for locating the line within highway ROW are discussed in Section 2.4.1.3.

2.1 ENGINEERING INFORMATION

2.1.3 Transmission Studies

Item 3. (Wis. Stat. § 1.12(4) Energy Priorities) There needs to be a more comprehensive and specific description of ATC's considerations of alternate technology substitutions as they relate to the energy priorities per Wis. Stat. § 1.12(4).

Response to Item 3:

Energy conservation, renewable resources, and the other energy priorities listed in Wis. Stat. § 1.12(4) are not technically feasible alternatives to the proposed facilities for ATC.

ATC, by statute (Wis. Stat. § 196.485(3m)(a)(2)), is precluded from owning generation or selling, marketing, or brokering electric energy or capacity. ATC is a separate, distinct entity from every generation owning utility (and non-utility generator owners) and wholesale or retail electric load serving entities. ATC, therefore, could not initiate any conservation efforts nor have any impact on any energy resource consumption anywhere in the state. These initiatives would require third-party involvement. Therefore, the priorities listed in Wis. Stat. § 1.12(4) are not technically feasible for ATC to implement.

Recommendation c: The last page of Appendix B, Exhibit B estimates distances to residences and schools. However, these are not stated as estimates and they are inaccurate. Commission staff strongly advises ATC to place wording in the body of the document, and somewhere in or around Exhibit B that explains the function of the study in ATC's choice of alternatives, and explains whether ATC's current, more detailed knowledge of costs and distances to residences and schools (or other particular changes in information) would have changed ATC's choice of preferred system alternative (and why or why not).

Response to Recommendation c:

Appendix B, Exhibit B1 (Management Scope Document) is an internal ATC Planning document that is provided to supplement the Joint Application's Section 2.1.3 "Transmission Studies." The Scope Document is essentially the threshold technical study that internally initiates every project proposed by

ATC. The information in the Scope Document is revised and refined for the Joint CPCN and Utility Permit Application and is continually vetted by the project team to ensure the conclusions of the study remain valid during the application process. For instance, the distances of the Preferred and Alternate Routes to such things as residences and schools were refined after completion of the Scope Document. Hence, the distances in the Scope Document are different (and more accurate) than those contained in the Joint Application itself.

The Scope Document is primarily documentation of electrical performance of alternatives taking into account engineering information such as cost estimates and route feasibility in the decision-making process. While the cost estimates in the Joint Application are 15 to 20% greater than those in the Scope Document as a result of better refined estimates, the cost increase applies equally to all of the options evaluated, such that the outcome is not affected. Table 12, Appendix B, Exhibit B1 (Management Scope Document, Section 11.4) has been updated and added to this document to reflect impact of construction cost increase and loss savings; increase of the loss savings is due to the increase in energy prices.

Revised Table 12 of MSD page 38 of 52-Effective Cost (2008 dollars)

	Option	Estimated Project Cost	Estimated PV of Loss Cost Savings	Total of Cost minus Savings
		$M	$M	$M
1	**North Madison-Huiskamp 138 kV**	**$12**	**15.72**	**($3.7)**
2	North Madison-Waunakee 138 kV	$17	15.72	$1.3
3	North Madison-Dane-Waunakee 138 kV	$23	15.72	$7.3
4	Yahara-Waunakee 69 kV	$12	5.25	$6.8
5	Sycamore-Ruskin 69 kV	$9	0	$9.0
6	North Madison-Sycamore 138 k V	$20.60	10.51	$10.1

Even though the estimated distances of the route from the new school site and Savannah Village residences found on page 35 of 52 of Appendix B, Exhibit B1 (MSD) and the cost estimates have been revised, the option proposed in this project is still the preferred system alternative.

2.1 ENGINEERING INFORMATION

2.1.3 Transmission Studies

2.1.3.2 Single Contingencies
2.1.3.3 Alternative Network Solutions
2.1.3.4 Electrical Losses for Each Alternative

Recommendation a: There is a brief description of project need in the body of the document, and a highly technical description in Appendix B. Staff strongly advises expanding the discussion in the body of the document so that it's more understandable to the general public.

Recommendation b: The discussion of system alternatives in the body of the document attaches specific routes to two of the alternatives, which is needlessly confusing.

Recommendation d: Numerous members of the public have asked whether a second 138kV circuit from North Madison to Sycamore could address the problems defined by ATC. It might be worthwhile to add something to the application, or to address this in separate FAQ material.

Item 4: (2.1.3.3) The data provided here and in Appendix B does not adequately explain ATC's choice of a system solution. Please explain why, based on available data, ATC chose the proposed system solution.

Item 5: (2.1.3.3) Explain the difference in estimated costs for the project and project alternatives between Appendix B (Exhibit B, pages 2, 14, 16, 18 and 20 of 52) and what is shown in section 2.1.3.3 (page 7 of 47).

Item 6: (2.1.3.3, page 7 of 47) Option 3 construction costs are estimated as being "$7 million dollars more than the recommended project", or $23 million. This would make the recommended project cost $16 million rather than the $12 million stated for the preferred route. Please clarify.

Response to Recommendations a, b, and d, and Items 4, 5 and 6:

ATC has corrected typographical errors and supplemented the text for Sections 2.1.3.2, 2.1.3.3, and 2.1.3.4 to collectively address Recommendations a, b, and d and Items 4, 5 and 6. The existing text of these sections should be deleted and replaced with the following:

2.1.3.2 Single Contingencies

A contingency analysis was performed on the transmission system in Dane County. ATC planning studies predict an overload on Blount-Ruskin 69 kV lines and the North Madison-Dane 69 kV line under peak load conditions in 2009 under single contingency conditions. By 2014, single contingencies will also cause overloads on the North Madison-ABS, North Madison 138/69 kV transformer and Christiana-Kegonsa 138 kV transmission lines. The severity and number of overloads on the Blount-Ruskin lines and the North Madison-Dane line will increase with time without the recommended project. The results of the analysis are as follows:

Single Contingency Overloads

Year	Circuit Overloaded	% Loading	Contingency
2009	Blount-Ruskin 1	118%	Blount-Ruskin 2
2009	Blount-Ruskin 2	118%	Blount-Ruskin 1
2009	North Madison-Dane	102%	West Middleton-Pheasant Branch
2009	North Madison-Dane	99%	North Madison-ABS
2009	North Madison-Dane	97%	North Madison-West Middleton
2010	Blount-Ruskin 1	119%	Blount-Ruskin 2
2010	Blount-Ruskin 2	119%	Blount-Ruskin 1
2010	Blount-Ruskin 1	100%	North Madison-Dane
2010	Blount-Ruskin 2	100%	North Madison-Dane
2010	North Madison-Dane	102%	West Middleton-Pheasant Branch
2010	North Madison-Dane	105%	North Madison-ABS

2010	North Madison-Dane	101%	North Madison-West Middleton
2014	Blount-Ruskin 1	122%	Blount-Ruskin 2
2014	Blount-Ruskin 2	122%	Blount-Ruskin 1
2014	Blount-Ruskin 1	108%	North Madison-Dane
2014	Blount-Ruskin 2	108%	North Madison-Dane
2014	North Madison-Dane	128%	West Middleton-Pheasant Branch
2014	North Madison-Dane	118%	North Madison-ABS
2014	North Madison-Dane	130%	North Madison-West Middleton
2014	North Madison-Dane	106%	Christiana-Kegonsa
2014	North Madison 138/69 kV Tr.	104%	North Madison-ABS
2014	North Madison-ABS	107%	North Madison 138/69 kV Tr.
2014	North Madison-ABS	112%	Kegonsa-McFarland
2014	North Madison-ABS	104%	North Madison-West Middleton
2014	North Madison-ABS	99%	Christiana-Kegonsa Circuit 1
2014	Christiana-Kegonsa 2	108%	Christiana-Kegonsa Circuit 1
2014	Christiana-Kegonsa 1	108%	Christiana-Kegonsa Circuit 2

2.1.3.3 Alternative Network Solutions

The effectiveness of the recommended project and alternative network solutions was evaluated based on the short-term and long-term performance.

The 69 kV network that connects North Madison, Blount, and West Middleton substations will reach its limits and is predicted to be unable to support local summer peak load in 2009 under single contingency conditions and under normal system intact conditions by 2014. Due to the local nature of this issue it will be referred to as the "Waunakee Problem." Any solution, at a minimum, has to resolve the Waunakee Problem in 2009 and beyond by incorporating the potential for expansion when the demand grows. In other words the selected project should provide the ability to mitigate projected overloads on the North Madison 138/69 kV transformer, North Madison-Dane 69 kV line, West Middleton-Pheasant Branch 69 kV line, and Blount-Ruskin 69 kV lines. The studies described in this Section 2.1.3 demonstrate that a new power source (new line) is needed to provide additional capacity in the Waunakee area.

There is a growing disparity between summer peak demand and generation provided in Dane County. By 2014, Dane County is projected to require power imports from generation sources external to Dane County for about 50% of its peak demand. Due to the age and high cost of generating units in Dane County, some units may not be operational at peak. This would result in even higher import requirements. This issue will be referred as the "Dane County Problem." Most of the power imports from generation located outside of Dane County enter into the county through two 345 kV substations, North Madison and Rockdale, located in the north and east respectively. The 138 kV and 69 kV lines originating from these two substations then deliver this imported power for use by Dane County customers. As this disparity continues to grow, these existing lines are projected to be stressed and overloaded after 2009. Although this project is not designed to address the Dane County Problem, it is considered as a factor when performance is compared. In general, any line originating from the North Madison or Rockdale substations would add import capability into Dane County and provide relief for existing line loading and would therefore be a preferred solution.

Five alternatives were initially developed and evaluated to address the reliability issues centered around Waunakee in northern Dane County to relieve overloads on lines. A sixth alternative was later developed and evaluated upon a Commission recommendation. Transmission system performance was evaluated by modeling each of the alternatives under 2009 summer peak conditions and beyond. ATC then applied its transmission system planning criteria to evaluate each alternative under various transmission line and equipment outages. The planning criteria applied included:

- No transmission line or transformer normal summer ratings exceeded under normal system intact conditions.
- No transmission line or transformer emergency summer ratings exceeded under single contingency conditions.

Alternative network solutions were developed and examined in ATC's Management Scope Document (MSD) provided in Appendix B, Exhibit B1. Cost estimates in this Joint Application are 15 to 20% greater (approximately a 1.2 multiplier) than those in the November 2005 MSD as a result of a revised method and updated estimates.[1] All estimated costs in this document are in 2008 dollars. The cost estimates provided below are scoping level estimates used for comparison of the alternatives. The alternative options are summarized below:

1. Construct a new North Madison-Huiskamp 138 kV line – Recommended Option .

Option 1 mitigates the Waunakee Problem in 2009 and beyond by adding capacity to the area where the capacity is short and provides potential for expansion when the demand for power grows in the area.

Though it is not designed to eliminate the Dane County Problem, this alternative will also be very helpful to the Dane County Problem because it originates from the North Madison Substation and provides geographic diversity and future expansion possibilities. It helps to reduce stress on lines both from the North Madison and Rockdale substations.

Based on the system performance, constructability, capital costs, losses, and overall least construction cost impact to ATC, Waunakee Municipal Utility, and Madison Gas and Electric, along with the least environmental impact, Option 1 is the preferred alternative. Option 1 was selected over Option 2 because Option 1 provides the most economical solution. The construction cost estimate for this alternative is approximately $12 million.

2. Construct a new North Madison-Waunakee 138 kV line.

The technical performance of Option 2 is comparable to the recommended project; however, the estimated project cost would be considerably higher. The higher cost is primarily driven by the need for a new substation site at Waunakee with 138 kV and 69 kV buses. In contrast, the recommended option will terminate at the Huiskamp Substation, which already has a 69 kV bus and was designed with room

[1] In the Original Application, there was a typographical error at the top of page 7 of 47 in section 2.1.3.3. The "1.2%" should have been "15% to 20%". The multiplier (1.2) was accidentally listed as the percentage increase.

for the future addition of a 138 kV bus. The construction cost estimate for Option 2 is approximately $17 million.

3. Construct a new Dane-Waunakee 138 kV line and convert North Madison-Dane 69 kV line to 138 kV operation.

Option 3 will eliminate the need for new right-of-way, will add capacity to the area by adding a new line, and improve capacity of the existing line. While it will provide temporary relief for the Waunakee Problem, Option 3 has a significantly higher cost without any long-term advantage. It will cost about $11 million more than the recommended option due to a longer route and higher construction costs[2]. This alternative would be located on existing right-of-way but significant portions will cross densely populated areas in both Dane and Waunakee and several environmentally sensitive areas making construction difficult. The construction cost estimate for Option 3 is approximately $23 million.

Even though this option originates from the North Madison Substation, it will not have a comparable impact on the Dane County Problem due to the effect of eliminating the existing 69 kV line, limiting expansion opportunities, and lacking in geographical diversity.

4. Construct a new Yahara River-Waunakee 69 kV line.

Option 4 would not eliminate the Waunakee Problem, particularly the projected overloads on the North Madison-Dane 69 kV line and the North Madison 138/69 kV transformer in later years. Though this alternative adds capacity in the Waunakee area, lines that originate directly from the North Madison Substation (a stronger power source) would still carry more power then their rating resulting in overloads.

Because this alternative does not originate from the North Madison or Rockdale substations, it provides poor expansion opportunities and will have little impact on the Dane County Problem.

[2] In the Original Application, there was a typographical error in the sentence comparing the cost of Option 3 to the Recommended Option. The difference in cost is actually $11 million but was erroneously listed as $7 million.

Option 4 would perform poorly compared to the recommended option. The projected loading on the Blount-Ruskin and North Madison-Dane 69 kV lines would be reduced to 92% and 100% respectively in 2009, but overloads would re-emerge in the following years, thereby providing only a temporary solution.

This 69 kV line alternative was not deemed to be a viable solution because it would eliminate some but not all overloads and would provide poor long term performance. The construction cost estimate for Option 4 is approximately $12 million.

5. Construct a new Sycamore-Ruskin 69 kV line.

As with Option 4, Option 5 would not eliminate the Waunakee Problem, particularly the overloads on the North Madison-Dane 69 kV line and North Madison 138/69 kV transformer in later years. This alternative would add capacity in the Waunakee area but lines that originate directly from the North Madison Substation (a stronger power source) would still carry more power then their rating resulting in overloads.

This alternative does not originate from the North Madison or Rockdale substations, provides poor expansion opportunities, and will have little impact on the Dane County Problem.

This 69 kV line alternative was not deemed to be a viable solution because it will eliminate some but not all overloads and would provide poor long term performance. The construction cost estimate for Option 5 is approximately $9 million.

6. Construct a new North Madison-Sycamore 138 line.

Option 6, which was studied in the same fashion as options 1-5, would not mitigate the Waunakee Problem, particularly the overloads on the Blount-Ruskin 69 kV lines in 2009 and on the North Madison-Dane 69 kV line and North Madison 138/69 kV transformer in later years. This alternative performs poorly because it does not add capacity to the Waunakee area. Overloads on the Blount-Ruskin 69 kV lines are part of the Waunakee Problem and a solution is being sought to reduce their loading. This alterative would work counter to that effort by increasing the loading on the Blount-Ruskin 69 kV lines instead of providing a reduction.

This alternative originates from the North Madison Substation and would help to mitigate the Dane County Problem but is not be comparable to the recommended option. This new line would share transmission ROW with an existing line for about 13 miles. The recommended project will be on a new right-of-way, adjacent to the existing line as the inability to schedule outages on the existing line make double circuit construction costly and difficult.

This 138 kV line alternative is not deemed to be a viable solution because it will not resolve the Waunakee Problem. The construction cost estimate for Option 6 is $20.6 million, approximately $8 million dollars more than the recommended option.

2.1.3.4 Electrical Losses for Each Alternative

A loss analysis was performed on each of the six options. The results of the analysis and comparison of the Recommended Option and the other five options are briefly described below and are contained in the ATC Management Scope Document in Appendix B.

Power losses at the time of peak are a measure of the additional generating capacity that must operate in order to deliver the power demanded by customers at the point of use. Transmission losses occur not only at the time of system peak, but throughout the year.

The system loss analysis was conducted using 2009 summer peak power flow. The system loss comparison and projected savings over 20 years for the Recommended Option and other options are listed in the table below. ATC's system loss benefit over 20 years is estimated to be approximately $15.72 million in 2008 dollars with the implementation of the Recommended Option, which is comparable to the savings from Option 2 and Option 3.

Loss Savings

	Present System	**Option-1** North Madison-Huiskamp 138 kV Line	**Option-2** North Madison-Waunakee 138 kV Line	**Option-3** North Madison-Dane Conversion 69 kV to 138 kV Dane-Waunakee double-circuit 138 kV	**Option-4** Yahara River-Waunakee 69 kV Line	**Option-5** Sycamore-Ruskin 69 kV Line	**Option-6** North Madison-Sycamore 138 kV Line
Conductor		ACSR T2-Hawk 2-477 kcmil 26/7	ACSR T2-Hawk 2-477 kcmil 26/7	ACSR T2-Hawk 2-477 kcmil 26/7	ACSR Hawk 477 kcmil 26/7	650 kcmil Cu HPFF Pipe Type Cable	ACSR Rail 954 kcmil 45/7
System Losses MW	352	349	349	349	351	352	350
Reduction MW	0	3	3	3	1	0	2
20 Year Value NPV in 2008 $M	0	15.72	15.72	15.72	5.25	0	10.51
Energy Saving per Year GWH	0	17.47	17.47	17.47	5.82	0	11.65

The cost of energy is obtained from Power Daily North America, an industry publication, which is then averaged for peak and shoulder peak months. From industry literature the current capacity cost is $600/kW to $800/kW to build, ATC loss analysis is based on capacity cost of $600/kW.

2.1.7 Transmission Costs

2.1.7.1 Cost of Alternatives

Item 9: Provide a cost/mile for placing 3-phase and single-phase distribution underground. Provide the cost for placing all 3-phase distribution underground on each of the two routes.

Response to Item 9:

The distribution lines along the Preferred and Alternate Routes are owned by Alliant Energy/Wisconsin Power and Light Company and Madison Gas and Electric Company (MG&E). The estimates below come directly from the local distribution company. The cost per mile for placing three-phase and single-phase distribution lines underground for Alliant Energy customers is $125,000 per mile and $63,000 per mile respectively. The cost per mile for placing three-phase and single-phase distribution lines underground for MG&E customers is estimated at $218,800 per mile and $69,000 per mile respectively. The MG&E distribution relocation numbers are based on estimates compiled over relatively short distances and extrapolated out to per mile costs. The cost to locate all three-phase distribution circuits underground is approximately $502,000 for the Preferred Route (8.5 miles) and approximately $187,000 for the Alternate Route (8.5 miles).

2.1 ENGINEERING INFORMATION

2.1.8 Construction Schedule

Item 7: (2.1.8) Endangered/threatened species surveys may be required prior to construction and the timing of these surveys needs to be incorporated into the construction schedule.

Response to Item 7:

If additional endangered/threatened species surveys are necessary, the current schedule, as shown in Section 2.1.8, allows ample time for the surveys to be conducted prior to the commencement of construction due to the time necessary for completing detailed engineering work and acquiring the necessary easements. A more specific survey schedule cannot be developed until and unless the Commission approves the Project and selects a route. Route selection is a factor in determining what, if any, surveys for threatened or endangered species need to be conducted.

2.2 PROJECT DEVELOPMENT AND ALTERNATIVES

Item 8: Provide a cost and environmental analysis for placing the proposed line underground for both a 0.5 mile and a 1.0 mile stretch along STH 113 in the vicinity of Savannah Village.

Response to Item 8:

Based on consultation with ECI, ATC's design consultant, the estimated costs of a 0.5 mile stretch of underground along STH 113 in the vicinity of Savannah Village is $3.06 million dollars while the estimate for a 1.0 mile stretch is $5.18 million.

The environmental impact of transmission line construction is dependant on the location of the ROW and the surrounding environmental features. Specific information on the environmental and land use characteristics for the proposed ROW for segments 26 and 32 (STH 113 as it passes near the Savanna Village neighborhood) are provided in Appendix A, Tables 1 and 2.

The following is a general description of the impacts of constructing an underground 138 kV transmission line. The underground line will be located inside of a concrete encasement (approximately 3 ft. x 3 ft., extending the length of the underground line). An underground splicing vault (8 ft. x 6 ft. x 16 ft.) will be required every 2,000 ft. To construct the underground line, an 8- to 10-foot deep trench will be excavated for the entire length of the underground line. An access path and soil stockpile area will be required on either side of the trench to allow for vehicle access (including excavation equipment, concrete trucks, cranes, and support vehicles). If bedrock is encountered during excavation, blasting may be required. All vegetation along the entire length and width of the construction zone will be removed during construction. After construction is completed trees, shrubs, and woody vegetation will not be allowed to regenerate, whereas low growing trees and shrubs would be allowed in portions of the ROW of an above ground line.

2.2 PROJECT DEVELOPMENT AND ALTERNATIVES

2.2.1 Local Level Alternatives

Item 10: (2.2.1) Please explain why local level alternatives would not address the reliability issues in northern Dane County.

Response to Item 10:

Local level (distribution) alternatives were not considered because the need for the recommended project is primarily driven by the projected thermal overloads on the transmission system due to lack of transmission capacity in northern Dane County. Furthermore, a local distribution solution was deemed not technically feasible as it does not solve a local transmission problem (i.e. the Waunakee Problem) as explained in Section 2.1.3.3.

2.2 PROJECT DEVELOPMENT AND ALTERNATIVES

2.2.4 Public Outreach

Item 11: (2.2.4) Refer to the recommendations at the end of the list.

Response to Item 11:

ATC has responded to the recommendations provided following the incompleteness items in its revisions to Section 2.1.3 of the Technical Support Document.

2.3 GENERAL TRANSMISSION LINE SITING INFORMATION

Item 12: (2.3.7) Please provide the village of Waunakee 2003 Comprehensive Plan maps and the Westport-Waunakee Joint Planning Area Comprehensive Plan maps, or their current equivalent.

Response to Item 12:

Please refer to the revised Appendix A, Figure 11, pages 5-6, which now contains both the village of Waunakee 2003 Comprehensive Plan maps and the Westport-Waunakee Joint Planning Area Comprehensive Plan maps.

2.4 DETAILED ROUTE INFORMATION

2.4.1 General Route Impacts

Item 13: (2.4.1. Table 2A) Please clarify that in the different land uses "length" refers to length of the centerline, and "acres" refers to the area within the ROW.

Response to Item 13:

Appendix A, Table 2A has been revised to apply the information provided in footnote 1 to the entire table and not just to the Zoning columns as was previously indicated. Footnote 1 explains that the Length columns are based on the length of each segment's proposed centerline that crosses each category and the area, and the Acres columns refers to the area within the ROW based on a 45-foot corridor extending from the edge of road ROW or an 80-foot corridor shared with existing transmission line ROW.

2.4 DETAILED ROUTE INFORMATION

2.4.1.4 Land Use and Zoning

Item 14: (2.4.1.4, page 18 of 47) The land use percentages add up to 105 percent rather than 100 percent. Please explain or clarify.

Response to Item 14:

The percentages listed in Section 2.4.1.4 are an approximate percentage of the land use and zoning classifications crossed by the total length of the Preferred and Alternate routes. They do not equal 100% because land use, zoning, and municipal ownership are different categories that are not intended to be added together. Each percentage refers to only one of the three categories. Hence, if all the percentages were added together for each of the three categories, the result would be 300%, which reflects 100% for each category. Therefore, when considered as a whole, this information gives an overall picture of the various segments.

To add clarity, the third and fourth paragraphs of the text in Section 2.4.1.4 should be revised as follows (edited text shown in **bold**):

> The Preferred Route would run across land that is presently dominated (approximately 56%) by agricultural use for row crops, hay, and pasture. Another approximately 43% of the Preferred Route is non-agricultural upland such as fallow fields and brush. Approximately 4% of the Preferred Route would cross commercial/industrial **zoned** land, 1.5% would cross residential**ly zoned** land, and 1% would cross wetland. Approximately 150 feet of the Preferred Route is presently in municipal ownership. No forested land occurs along the Preferred Route centerline but is located on the fringes.
>
> The Alternate Route would run across land that is presently dominated (approximately 61%) by agricultural use for row crops, hay, and pasture. Another approximately 30% of the Alternate Route is non-agricultural upland such as fallow fields and brush. Approximately 7% of the Alternate Route would cross commercial/industrial **zoned** land, and 7% would cross wetland. Approximately 4% of the Alternate Route is presently in municipal ownership, and 51 feet would cross land presently zoned as residential. No forested land occurs along the Alternate Route centerline but is located on the fringes.

2.4 DETAILED ROUTE INFORMATION

2.4.1 General Route Impacts

2.4.1.5 Buildings

2.4.1.5.1 Homes

Item 15: (2.4.1.5.1, page 19 of 47) The number of residences within 300 feet of either route option should be stated here.

Response to Item 15:

Please add the following text to the beginning of Section 2.4.1.5.1:

As stated in Appendix A, Table 3, there are 30 inhabitable residences (all single family homes) within 300 feet of the Preferred Route. There are 28 inhabitable residences (all single family homes) within 300 feet of the Alternate Route.

2.4 DETAILED ROUTE INFORMATION

2.4.2 Impacts by Land Type

2.4.2.4 Upland

Item 16: (Section 2.4.2.4) For both routes: please describe the vegetative cover of the uplands affected by the ROW.

Response to Item 16:

The revised Appendix A, Tables 2a and 3, have been revised such that the upland column includes only fallow field. The original version inadvertently included residential and commercial land use in the upland category, along with fallow field. Footnotes on each table were also updated to reflect what is included in the uplands column.

The existing text in Section 2.4.2.4 should be deleted and replaced with the following (updated text shown in **bold**):

> Lands falling within this classification include uplands exclusive of agricultural, forest, and developed land (e.g., road, road ROW, residential properties). Approximately **30% of the length** of the Preferred Route and **24%** of the length of the Alternate Route centerline would cross land classified as upland. The uplands exclusive of these other classifications is fallow field.

2.4 DETAILED ROUTE INFORMATION

2.4.2 Impacts by Land Type

2.4.2.7 County-Owned Land

Item 17: (2.4.2.7, pages 20-21 of 47) County parkland is described as being "across Schumacher Road approximately 100 feet to the west of the Alternate Route…." Should that read "east of the alternate route?"

Response to Item 17:

Yes, this statement as written in the Application was an error. Please replace the last sentence of Section 2.4.2.7 so that it reads:

> However, along Segment 13 Dane County parkland lies across Schumacher Road approximately 100 feet to the east of the Alternate Route centerline.

2.4 DETAILED ROUTE INFORMATION

2.4.4 AGRICULTURAL LAND

2.4.4.2 Practices Potentially Affected

Item 18: (2.4.4.2) Please provide a map showing existing distribution along both routes, with a description as to type, and identification of where single-phase transmission would be placed underground, both along the route, and relative to the proposed line. On that map, please also show the location of farms with animal confinement facilities within one distribution circuit mile of each route.

Response to Item 18:

ATC has interpreted Item 18 to be referring to single-phase distribution, not transmission. Appendix A, Figure 17, is provided showing the location of the existing distribution and animal confinement areas along the proposed and alternate line routes. Additionally, all single-phase distribution is proposed to be placed underground. The location of the underground distribution relative to its existing location and the proposed transmission line orientation will be determined in conjunction with the local distribution utility during final design.

2.4 DETAILED ROUTE INFORMATION

2.4.5 Forest Land

Item 19: (Section 2.4.5, last paragraph) What is the height and/or stem diameter of "low growing woody vegetation"? What is the dimension of the "area where transmission line structures would be installed"? What is the width of "access for construction equipment"?

Response to Item 19:

ATC has standard ROW clearing practices, which vary based on the line design (width of the wire zone), property owner specifications, and environmental features. ATC clearing practices are based on vegetation height, not stem diameter. In general, standard clearing practices (including for construction) require clearing a wire zone that is a minimum of 15 feet wide centered on the transmission line's centerline plus a 15-foot circular area around each pole structure.

2.4 DETAILED ROUTE INFORMATION

2.4.7 Endangered, Threatened, or Special Concern Species, and Natural Communities

Item 20: (Section 2.4.7, par. 2, *and sections 3.1, 3.3 and 4 of the Rare Species Investigation Report*) Please modify the text in both documents to acknowledge the limitations of ATC's field investigation and qualify the statement that "none of the eight (threatened or endangered) species were observed along either route during the field investigation". The statement as written leaves the impression that the field investigation was more conclusive than it actually was, given the method, extent, and timing of the survey.

Response to Item 20:

The first two paragraphs of Section 2.4.7 should be deleted and replaced with the following text:

> Information concerning the presence of rare species (threatened, endangered, or special concern) within two miles of the Preferred and Alternate Routes was obtained through a review of the Wisconsin Natural Heritage Inventory (NHI) database. The NHI database notes the presence of three historic and twenty non-historic occurrences of threatened, endangered, or special concern species, and nine occurrences of natural communities within two miles of the Preferred and Alternate Routes. None of the non-historic NHI records for Threatened, Endangered, or Special Concern Species overlaps with either the Proposed or Alternate Route corridors.
>
> ATC, with its consultant, Graef, Anhalt, Schloemer & Associates, Inc. (GASAI), reviewed the habitat requirements of the non-historic NHI species listings and compared them to habitat occurring along the Preferred and Alternate Routes. Fifteen species were deemed to have potential habitat along at least one of the route corridors. A field investigation was completed for both routes between September 14 and September 21, 2005. None of the fifteen species were observed along either route during the field investigation. Eight of the fifteen species were determined to have at least marginal habitat along one or both of the study corridors. Because the intent of the investigation was to identify the presence of suitable habitat, rather than serve as a comprehensive

survey for each species, the field survey was not necessarily conducted at the optimal time for identifying each species.

Once a route has been selected, ATC will survey the areas with potentially suitable habitat and implement avoidance measures if a species is subsequently identified.

Item 21: (*Rare Species Investigation Report, Section 2.2*) Please identify those segments where access was not available for the field investigation.

Response to Item 21:
Segments running along existing transmission lines were fully accessible for field investigation. Segments running along roads were accessed from the existing public road easement. Areas outside the public road easement (approximately 45 feet) were observed from the easement edge. The only areas where no access was available for the field investigation were:

- The portion of Segment 24 running from the parking lot behind the building on the south side of Foundation Circle to the existing ATC transmission line (approximately 300 feet). This area is a railroad spur.

- The portion of Segment 35 from its northern terminus to West River Road (approximately 1300 feet).

Item 22: (*Rare Species Investigation Report, Section 3.4; Section 2.4.5 pages 23-4 of 47*) There is an NHI occurrence of southern dry mesic forest located along Segment 49 of the preferred route. The text should be revised to reflect the NHI occurrence and the statement that no additional natural communities were identified should be revised. Impacts to the community north of Daley Road should also be addressed.

Response to Item 22:
Both the 1976 and 2004 aerial photography show the southern dry mesic forest element occurrence along Segment 49 south of Daley Road, however field investigations showed that the forest is set back approximately 250 feet from CTH I. The southern dry mesic forest element occurrence is mapped based on the parcel boundary, so when viewed alone it appears that the forest extends to the road ROW. However, the actual forest boundary does not overlap with the proposed transmission line ROW.

The forest fragment along Segment 49 north of Daley Road lies along a drainage ditch and was observed from the road ROW. The species listed in section 2.4.5 Forest Land are those visible from the ROW but may not be representative of the overall forest composition since visibility into the community was limited. Since the portion of the forest adjacent to CTH I and within the preferred ROW corridor lies predominantly along a drainage having hydric soils, it is unlikely to support a dry-mesic forest community.

Item 23: (*Rare Species Investigation Report, Table B2*) What is the basis for determining no presence of red-tailed prairie leaf hopper habitat? The timing of the field investigation and/or the protocol used may be insufficient for making this determination. Please note that additional surveys may be required for this species.

Response to Item 23:

The determination of no habitat was based on not observing any prairie communities or prairie dropseed (*Sporobolus heterolepis*) within either of the two corridors. While the field investigation was somewhat late in terms of the optimal survey time for dropseed, the lack of prairie habitat makes it unlikely that the species is present.

Item 24: (*Rare Species Investigation Report, Table B2*) Please clarify the determination of no habitat for the prairie parsley and prairie bush-clover and habitat for the rough rattlesnake-root given that they have overlapping habitat characteristics and that the timing of the survey was not optimal for all three species.

Response to Item 24:

Prairie parsley and prairie bush-clover are prairie species and no prairie habitat was observed along either of the two corridors. The suitable habitat indicated in Table B2 of the Confidential Rare Species Report for rough rattlesnake-root includes roadsides and railroad grades as well as prairie. Roadsides and railroad grades are not noted as suitable habitat for prairie parsley and prairie bush-clover. Therefore, it appeared that habitat did exist for rough rattlesnake-root along roadsides and railway grades but not the other two species.

Item 25: (*Rare Species Investigation Report, Table B2*) Please delete this phrase, under Impact Potential for Henslow's sparrow: "…the species can avoid construction activities." This statement is inaccurate. "Avoidance" needs to be demonstrated by the applicant based on knowledge of species presence and/or potential use of a site.

Response to Item 25:

ATC will survey the specific areas of habitat identified in the Rare Species Report for the ordered route, to further determine the presence/absence of this species. If it is determined that the species is present, and construction will occur during the active nesting period, ATC will work with the WDNR to determine an appropriate avoidance protocol.

The habitat in question is foraging habitat, not nesting habitat. Nesting habitat consisting of tall dense grass with litter and some standing dead vegetation exists outside the proposed corridor (approximately 100 plus feet) but the corridor itself runs across the edge of an active farm field. Since the habitat within the proposed ROW is not suitable for nesting, if any sparrows were within the ROW they would be mobile and could thus "avoid" the temporary construction disturbance.

Item 26: (*Rare Species Investigation Report, Table B2*) Under Impact Potential for Blanding's, please revise this section so that it does not imply that an incidental approach would be used to determine the presence or absence of Blandings. A habitat assessment should be completed along portions of the approved route that affect wetlands, and avoidance measures applied if necessary.

Response to Item 26:

Please see the new Exhibit E-3, the Blanding's Turtle Avoidance Guidelines, which outlines the approach that ATC will take to determine what avoidance measures will be applied.

Item 27: (2.4.7, page 24 of 47 and 2.4.12.4, page 28 of 47) Sixmile Creek is an Exceptional Resource Water of the state (ERW). It could be a corridor for species of concern (e.g. Blandings turtle) and other species moving between Lake Mendota, the Sixmile Creek riparian wetlands and the Waunakee Marsh. Please address both the ERW and environmental corridor aspects of Sixmile Creek, and describe avoidance measures and other special measures to be used along the stream and its wetlands should this route be selected.

Response to Item 27:

Section 2.4.12.4 identifies Six Mile Creek as an Exceptional Resource Water. Also, please see revised Appendix E, Table 1, which now identifies this as an exceptional resource water. Segments 27 and 31, near Six Mile Creek, were identified in the Rare Species Report as potential Blanding's turtle habitat. ATC's Blanding's Turtle Avoidance Guidelines will be followed if the Alternate Route is ordered. Please see Appendix E, new Exhibit E-3 for the Blanding's Turtle Avoidance Guidelines.

2.4 DETAILED ROUTE INFORMATION

2.4.10 Access Issues

Item 28: (2.4.10 page 26 of 47). Access to construction along the railway portion of the West Route could create a majority of the adverse impacts to wetlands on that route. While actual access rests on future negotiations, please specifically describe the access to various sections of line or individual poles that ATC would hope to use. ATC's standard access policy language is not sufficient for this case.

Response to Item 28:
The railway portion of the West Route described in Item 28 pertains to Segments 27 and 31. Access for Segments 27 and 31, which are adjacent to the railroad, is expected to be directly along the existing transmission line ROW because alternate access routes are limited by the adjacent wetlands, forested areas, Six Mile Creek, and railroad track. For Segments 27 and 31, the existing transmission ROW is located between the railroad track and Six Mile Creek. The railroad track does not offer an opportunity for construction access, nor is there a feasible opportunity to cross the railroad track other than at an existing road crossing.

The presumed access route along the existing transmission line ROW (for Segments 27 and 31) is shown on pages 8-10 of Appendix A, Figure 14b (Environmental Features and Access Plan). Locations where temporary clear span bridges are required for access are also shown.

Item 29: (2.4.10, page 26 of 47) Appendix E, Table 2 indicates a wetland crossing of the Sixmile Creek wetlands that is not reflected in the discussion on page 26.

Response to Item 29:

Section 2.4.12.3, "Wetland Crossings," states that access through several wetlands will be required, and references Appendix E, Table 2, which lists each wetland and whether it will be crossed and/or have structures placed in it. Sections 2.4.10 and 2.4.12.3 also reference Appendix A, Figure 14a and 14b, which shows the anticipated access through all wetlands, including those adjacent to Sixmile Creek.

2.4 DETAILED ROUTE INFORMATION

2.4.12 Wetlands and Wetland Crossings

2.4.12.4 Sensitive Wetlands and Areas of Special Natural Resource Interest

Item 30: (2.4.12.4, page 28 of 47). Provide an electronic copy of the wetlands delineation report including the Floristic Quality Index Information.

Response to Item 30:

The wetlands delineation report including the Floristic Quality Index Information is being provided under separate cover.

2.4 DETAILED ROUTE INFORMATION

2.4.12 Wetlands and Wetland Crossings

Item 31: (2.4.12 Appendix E, Table 2) Wetland descriptions are inadequate. Please provide the dominant and non-dominant wetland vegetation for each of the 3 major strata (tree/shrub/herb). Also, remove references to "appears navigable" and "does not appear navigable" for each of the identified waterways.

Response to Item 31:

Dominant and non-dominant vegetation information has been added to the Resource Description column of revised Appendix E, Table 2. Also, a footnote was added to the table to clarify that the references to navigability are based on the opinion of the consulting firm doing the field investigation. This note reads as follows:

> References to "appears navigable" or "does not appear navigable" were based on field investigations by Graef, Anhalt, Schloemer and Associates, Inc. "Does not appear navigable" means that background data indicates the presence of an intermittent stream or drainage way, however the field investigation did not identify a stream having bed and banks able to support a canoe or water craft and, therefore, ATC is not applying for a stream crossing permit at this location.

Item 32: (2.4.12 Appendix E, Table 3) to make this table useful, please add the following information:

a. channel width and depth
b. water depth and flow (if present)
c. bank slope
d. bed substrate (i.e. silt, sand, cobble, etc.)
e. in-stream habitat

Response to Item 32:

Please see the revised Appendix E, Table 3.

2.5 CONSTRUCTION METHODS

2.5.1 General Construction Information

2.5.1.7.1 Agricultural Areas

Item 33: (2.5.1.7.1, page 32 of 47) Please place the discussion of compensation for damages in farmland with the discussion of the restoration of affected agricultural land (pages 36-37). Specifically address what ATC would do for farmers to restore land under statute, and for what items ATC would negotiate to compensate landowners.

Response to Item 33:

Insert the following at the end of the first paragraph of Section 2.5.1.7.1: ATC pays for crop loss by determining average yields and prices received as if the crop attained maturity and were to be marketed. ATC also compensates the landowner for soil compaction where it exists, either by directly paying for a contractor to perform additional tiling to loosen the compacted soils or by directly compensating the farmer's time and machinery costs in having to perform additional tiling to loosen the compacted soils and/or for future reduction of crop yields as a result of the compacted soils.

(Item 33 is also discussed on pages 36A and 36B.)

2.5 CONSTRUCTION METHODS

2.5.1 General Construction Information

2.5.1.7.2 Forest Lands

Item 34: (2.5.1.7.2, page 33 of 47) Please address how ATC would work with property owners to replace trees lost to the new ROW on either route.

Response to Item 34:

ATC recognizes that trees on a new ROW would need to be trimmed or removed due to the proximity to the proposed transmission line. That can be an additional concern to a landowner. A healthy and desirable species located close to a home is given additional consideration in the easement payment offer. As an alternative, and if the landowner desires, ATC will arrange with a local landscape company to plant replacement trees beyond the easement area. However, generally, only for tree removal cases does ATC consider a replacement plan or additional payment offer.

2.5 CONSTRUCTION METHODS

2.5.1 General Construction Information

2.5.1.7.3 Surface Waters and Wetlands

Item 35: (2.5.1.7.3, page 33-34 of 47) The discussion of construction in surface waters and wetlands is a boilerplate discussion. Please provide information that specifically addresses the actual wetland and stream crossings along the proposed routes, particularly for those in the Sixmile Creek corridor.

Response to Item 35:

Actual stream and wetland locations are listed in Appendix E, Table 2. This table states the number of poles to be placed in each wetland (worst case), whether each stream location will require a permit to place a temporary clear span bridge, or whether vehicular crossing will be restricted (i.e., CT 2/3, CT-4, or CT-4W as described in Section 2.5.4). Appendix A, Figures 14a and 14b, show anticipated access paths to and across each wetland and stream as applicable.

2.5 CONSTRUCTION METHODS

2.5.4 Wetland Crossings

2.5.4.2 Control of Invasive Species

Item 36: (2.5.4.2, page 36 of 47) Control of Invasive Species is only mentioned in relation to wetlands, and then only reed canary grass is mentioned. Provide strategies for controlling upland invasive species, particularly species such as wild parsnip (Pastinaca sativa).

Response to Item 36:

ATC's past experience indicates that accessing or constructing transmission lines does not cause a significant spread of invasive species. However, prior to construction, ATC will identify areas that are significantly impacted by invasive species, including wild parsnip, and develop a strategy to prevent the spread of seeds to areas where invasive species have not been identified. This strategy will be dependent on the species identified and the time of year that construction will take place. Examples may include mowing at strategic times to prevent the production of seeds, cleaning or brushing equipment, or constructing during frozen ground conditions.

Section 2.5.4.2 only addresses invasive species in relation to wetlands because it is under a section specific to wetlands (Section 2.5.4 Wetland Crossings).

2.5 CONSTRUCTION METHODS

2.5.5 Re-vegetation

Item 33: Please place the discussion of compensation for damages in farmland with the discussion of the restoration of affected agricultural land (pages 36-37). Specifically address what ATC would do for farmers to restore land under statute, and for what items ATC would negotiate to compensate landowners.

Response to Item 33:

(Item 33 is also discussed on page 32A) Landowners will be compensated for crop and other damages arising from construction activity consistent with the terms in the property easements. ATC pays for crop loss by determining average yields and prices received as if the crop attained maturity and were to be marketed. ATC also compensates the landowner for soil compaction where it exists, either by directly paying for a contractor to perform additional tiling to loosen the compacted soils or by directly compensating the farmer's time and machinery costs in having to perform additional tiling to loosen the compacted soils and/or for future reduction of crop yields as a result of the compacted soils.

2.5 CONSTRUCTION METHODS

2.5.6 Erosion Control Plan (sites greater than 1 acre)

2.5.6.2 Erosion Control Measure Site Plan

Item 37: (2.5.6.2, page 38 of 47) Provide an example of the decision flow chart that ATC will use for determining what erosion control measures to use at each construction site during construction.

Response to Item 37:

Please see new Appendix E, Exhibit E-4, Erosion & Sediment Control Practice Selection Flowchart provided with this response as an example of the type of decision making flowchart that will be used for this project. This flowchart is being developed jointly with the WDNR, and is presented here only as an example.

2.5 CONSTRUCTION METHODS

2.5.7 Materials Management Plan

Item 38: (2.5.7, page 39 of 47) Please note that both state agencies expect ATC to submit maps locating temporary staging areas once they have been identified.

Response to Item 38:

ATC will submit maps locating temporary staging areas prior to construction.

2.5 CONSTRUCTION METHODS

2.5.8 Dewatering Plan

Item 39: (2.5.8, page 40 of 47) Please note that no dewatering is allowed directly to storm sewer or waterways.

Response to Item 39:

The Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit for Pit/Trench Dewatering (WPDES Permit No. WI-0049344-2) "is applicable to discharges of pit/trench dewatering water directly to surface waters or indirectly to groundwaters via seepage." Further, the general permit specifies that "if a discharge is appropriately covered by the WPDES construction site storm water discharge permit, then this permit does not apply to the discharge. This is designed to avoid duplicate permitting of a facility." ATC has applied for the WPDES construction site storm water discharge permit under Wis. Stat. ch. 283 and Wis. Admin. Code ch. NR 216, and any dewatering will comply with the requirements of the WPDES General Permit for Pit/Trench Dewatering. As discussed in Section 2.5.8 of the Technical Support Document, it is unknown whether dewatering activities will be necessary.

2.8 DNR PERMITS AND APPROVALS

2.8.1 Waterways and Wetlands

Item 40: (2.8.1, page 43 of 47) Water quality certification from the DNR is issued under NR 299.

Response to Item 40:

While Section 2.8.1 only referenced the federal authority regarding fill (or structures) placed in wetlands, ATC has acknowledged in its Utility Permit Application (Part 1), contained in Appendix E, Exhibit E1, and discussed in Section 2.8, that wetland water quality certification is issued by the WDNR pursuant to Wis. Stat. § 281.36 and Wis. Admin. Code chs. NR 103 and 299.

2.9 OTHER AGENCY CORRESPONDENCE

2.9.3 Agency Permits

2.9.3.1 Local

Item 41: (2.9.3.1, page 46 of 47) Provide missing information on county permits required for both routes.

Response to Item 41:

ATC will contact the following entities for road crossing and/or road occupancy permits and the information will be submitted to the PSCW upon receipt:

Preferred Route
Wisconsin DOT – Highways 19 and 113
Dane County – Highways V and I
Town of Vienna – Norway Grove Rd, Norway Grove School Rd, Daley Rd, Cuba Valley Rd, and Easy St.
Town of Westport – Easy St, Bong Rd, and West River Rd

Alternate Route
Wisconsin DOT – Highway 19
Dane County – Highway V
Village of Waunakee – Raemisch Rd, Nord Dr, and Foundation Cir
Town of Vienna – Patton Rd, Lovick Rd, Cuba Valley Rd, Schumacher Rd, and Easy St.
Town of Westport – Easy St, Mill Rd, and Kennedy Dr.

INTRODUCTORY NOTE ABOUT APPENDIX B: SCOPE DOCUMENT

Recommendation c: The last page of Appendix B, Exhibit B estimates distances to residences and schools. However, these are not stated as estimates and they are inaccurate. Commission staff strongly advises ATC to place wording in the body of the document, and somewhere in or around Exhibit B that explains the function of the study in ATC's choice of alternatives, and explains whether ATC's current, more detailed knowledge of costs and distances to residences and schools (or other particular changes in information) would have changed ATC's choice of preferred system alternative (and why or why not).

Response to Recommendation c:

The following Management Scope Document ("Scope Document") is essentially the threshold technical study that internally initiates every project proposed by ATC. The Scope Document is primarily documentation of electrical performance of alternatives taking into account engineering information such as cost estimates and route feasibility in the decision-making process.

As a project matures, ATC continues to complete studies, to evaluate the results, and to revise and refine the information about the project. This refined information is placed within the Technical Support Document, which is Appendix A of the Joint CPCN and Utility Permit Application. As a consequence, the information contained within Appendix A is more accurate than (and may be different than) the information contained within this Scope Document. Nevertheless, ATC includes this initial Scope Document as Appendix B to supplement the Joint Application's Section 2.1.3 "Transmission Studies."

Please note that Table 12 of this Appendix B, Exhibit B, which compares the costs of the six options, has been updated and may be found at Page 3B in the Technical Support Document.

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